TEJUS
CONSULTANTS

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Project	Providing Cement Concrete Road Improvements to Roads and Drains at Bharath Nagar cross roads near Baloon factory surrounding in ward No.06 Byatarayanapura Sub division.
Client	Bruhat Bangalore Mahanagar Palike
Consultant	TEJUS CONSULTANTS
Contractor	M/S Sathya constructions
Grade of concrete:	M20
Size of cube:	150x150x150 mm
Reference IS code:	IS:516-1959

Sl.No.	Date of Casting	Date of testing	Age of Test	Weight of Cube	Area of Cube	Failure load	Compressive strength	Avg. Compressive strength
				Kg	mm^2	KN	N/mm^2	N/mm^2
1	26.10.2019	02.11.2019	7 days	8.132	22500	276	12.27	12.53
2	26.10.2019	02.11.2019	7 days	8.148	22500	282	12.53	
3	26.10.2019	02.11.2019	7 days	8.143	22500	288	12.80	

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ಸಹಾಯಕ ಅಧಿಯಂತರರು
ಬಿ.ಬಿ.ಎಂ.ಪಿ ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

ಸಹಾಯಕ ಅಧಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿ.ಬಿ.ಎಂ.ಪಿ., ಬೆಂಗಳೂರು-24

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CONSULTANTS

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Project	Providing Cement Concrete Road Improvements to Roads and Drains at Bharath Nagar cross roads near Baloon factory surrounding in ward No.06 Byatarayanapura Sub division.
Client	Bruhat Bangalore Mahanagar Palike
Consultant	TEJUS CONSULTANTS
Contractor	M/S Sathya constructions
Grade of concrete:	M20
Size of cube:	150x150x150 mm
Reference IS code:	IS:516-1959

Sl.No.	Date of Casting	Date of testing	Age of Test	Weight of Cube	Area of Cube	Failure load	Compressive strength	Avg. Compressive strength
				Kg	mm^2	KN	N/mm^2	N/mm^2
1	26.10.2019	06.11.2019	28 days	8.136	22500	438	19.47	19.64
2	26.10.2019	06.11.2019	28 days	8.142	22500	442	19.64	
3	26.10.2019	06.11.2019	28 days	8.148	22500	446	19.82	

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TEJUS

AGGREGATE IMPACT VALUE
(IS: 2386 Part - 4)

Project	Asphalting to Roads and Improvements to Drains at Defence Layout and Ashrama Road in ward No 06 Byatarayanapura Sub Division.		
Client	BRUHAT BANGALORE MAHANAGARA PALIKE		
Consultant	M/s Tejus Consultants		
Contractor	M/S Sathya constructions		
Proposed Use	WMM	**Date of Sampling**	**12.11.2019**
Sample Location	**At plant**	**Date of Testing**	**12.11.2019**

Sl. No.	Description		Test No. 1	Test No. 2	Test No. 3	Spec Limit (%)
1	Wt. of stone pieces (dry) passing IS Sieve 12.5mm but retained in IS sieve 10mm (gm)	(Wa)	354.00	346.00	350.00	
2	Wt. of the fraction retained in IS sieve 2.36mm after the impact test (gm)	(Wb)	272.00	264.00	268.00	
3	Wt. of the fraction passed in IS sieve 2.36mm after the impact test (gm)	(Wc)	82.00	82.00	82.00	
4	Aggregate Impact Value (%)	(Wc/Wa)* 100	23.16	23.70	23.43	
5	Average Aggregate impact value	(%)	23.43			Max - 30 %

Remarks : ✓ Satisfactory / Not Satisfactory

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FLAKINESS AND ELONGATION INDICES (IS 2386, PART 1)

Project	Asphalting to Roads and Improvements to Drains at Defence Layout and Ashrama Road in ward No 06 Byatarayanapura Sub Division.
Client	BRUHAT BANGALORE MAHANAGARA PALIKE
Consultant	M s Tejus Consultants
Contractor	M/S Sathya constructions

Type of Material	WMM		Proposed Use	WMM
Sample Location	At plant		Date of Sampling	12.11.2019
			Date of Testing	12.11.2019

Size of aggregate		Flakiness Index		Elongation Index	
Passing through IS sieve, mm	Retained on IS sieve, mm	Total wt. of aggregate retained on sieves (A) gms.	Wt. of aggregate passing from Flakiness gauge (B) gms	Wt. of aggregate retained on Flakiness gauge (C) gms	Wt. of aggregate retained on Elongation gauge after retained on Flakiness gauge(D)gms
63.0	50.0	0	0	0	0
50.0	40.0	0	0	0	0
40.0	31.5	0	0	0	0
31.5	25.0	0	0	0	0
25.0	20.0	0	0	0	0
20.0	16.0	834	72	762	52
16.0	12.5	1206	112	1094	120
12.5	10.0	452	72	380	62
10.0	6.3	508	62	446	38
Total		3000	318	2682	272

Note: Minimum 200 Pcs should be taken on each fraction of test

Flakiness Index(%):	10.60
Elongation Index(%):	10.14
Combined FI+EL (%)	20.74

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GRADATION FOR WMM
(As per MORT&H 400-11)

Name of Work	:	Asphalting to Roads and Improvements to Drains at Defence Layout and Ashrama Road in ward No 06 Byatarayanapura Sub Division.
Client	:	BRUHAT BANGALORE MAHANAGARA PALIKE
Consultant	:	M/s Tejus Consultants
Contractor	:	M/S Sathya constructions
Date of Testing	:	12.11.2019
Type of Mix	:	WMM
Sample I/D	:	WMM 1

Sample Location:	At plant	Date of Sampling:	12.11.2019
Type of material & Purpose:	WMM	Date of testing:	12.11.2019
		Oven Dry Wt.(gms):	10000.0

IS Sieve size in mm	Weight retained (gm)	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits
53	0	0	0.00	100.00	100.00
45	408	408	4.08	95.92	95-100
22.4	2428	2836	28.36	71.64	60-80
11.2	2640	5476	54.76	45.24	40-60
4.75	1428	6904	69.04	30.96	25-40
2.36	1242	8146	81.46	18.54	15-30
0.6	548	8694	86.94	13.06	8.0-22.0
0.075	842	9536	95.36	4.64	0-8
Pan	464				
Total	10000				

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ಬಿ.ಬಿ.ಎಂ.ಪಿ ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

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AGGREGATE IMPACT VALUE
(IS: 2386 Part - 4)

Project	Asphalting to Roads and Improvements to Drains at Defence Layout and Ashrama Road in ward No 06 Byatarayanapura Sub Division.		
Client	BRUHAT BANGALORE MAHANAGARA PALIKE		
Consultant	M s Tejus Consultants		
Contractor	M/S Sathya constructions		
Proposed Use	WMM	**Date of Sampling**	**13.11.2019**
Sample Location	**At plant**	**Date of Testing**	**13.11.2019**

Sl. No.	Description		Test No. 1	Test No. 2	Test No. 3	Spec Limit (%)
1	Wt. of stone pieces (dry) passing IS Sieve 12.5mm but retained in IS sieve 10mm (gm)	(Wa)	356.00	348.00	350.00	
2	Wt. of the fraction retained in IS sieve 2.36mm after the impact test (gm)	(Wb)	276.00	268.00	272.00	
3	Wt. of the fraction passed in IS sieve 2.36mm after the impact test (gm)	(Wc)	80.00	80.00	78.00	
4	Aggregate Impact Value (%)	(Wc/Wa)* 100	22.47	22.99	22.29	
5	Average Aggregate impact value	(%)	22.58			Max - 30 %

Remarks : ✓ Satisfactory / Not Satisfactory

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FLAKINESS AND ELONGATION INDICES (IS 2386, PART 1)

Project	Asphalting to Roads and Improvements to Drains at Defence Layout and Ashrama Road in ward No 06 Byatarayanapura Sub Division.
Client	BRUHAT BANGALORE MAHANAGARA PALIKE
Consultant	M/s Tejus Consultants
Contractor	M/S Sathya constructions

Type of Material	WMM	Proposed Use	WMM
Sample Location	At plant	Date of Sampling	13.11.2019
		Date of Testing	13.11.2019

Size of aggregate		Flakiness Index		Elongation Index	
Passing through IS sieve, mm	Retained on IS sieve, mm	Total wt. of aggregate retained on sieves (A) gms.	Wt. of aggregate passing from Flakiness gauge (B) gms	Wt. of aggregate retained on Flakiness gauge (C) gms	Wt. of aggregate retained on Elongation gauge after retained on Flakiness gauge(D)gms
63.0	50.0	0	0	0	0
50.0	40.0	0	0	0	0
40.0	31.5	0	0	0	0
31.5	25.0	0	0	0	0
25.0	20.0	0	0	0	0
20.0	16.0	852	70	782	52
16.0	12.5	1200	108	1092	123
12.5	10.0	452	78	374	62
10.0	6.3	496	62	434	38
Total		3000	318	2682	275

Note: Minimum 200 Pcs should be taken on each fraction of test

Flakiness Index(%):	10.60
Elongation Index(%):	10.25
Combined FI+EL (%)	20.85

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TEJUS

Field Dry Density test by Sand Replacement Method (As per IS 2720 (Part 28)

Project	Asphalting to Roads and Improvements to Drains at Defence Layout and Ashrama Road in ward No 06 Byatarayanapura Sub Division.		
Client	BRUHAT BANGALORE MAHANAGARA PALIKE		
Consultant	M/s Tejus Consultants		
Contractor	M/S Sathya constructions		
Date of Testing	19.11.2019		
Layer no. or level	WMM I layer		
Depth of hole	250mm		
Field density:	1	2	3
Wt. of wet material from hole (Ww) gms.	6158	6114	6206
Wt. of sand+cylinder before pouring (w1) gms.	14000	14000	14000
Wt. of sand+cylinder after pouring (w2) gms.	9736	9732	9715
Wt. of sand in cone (w3) gms.	835	842	830
Wt. of sand in hole (w4)=(w1-w2-w3) gms.	3429	3426	3455
Bulk density of sand (γs)gm/cc	1.31	1.32	1.31
Bulk density of material(i.e. wt. of the wet material) (γb)=(Ww/w4*(γs))gm/cc	2.35	2.36	2.35
Moisture meter reading(moisture content)	12.45	12.56	12.57
Result			
FDD(Wt of the dry material)=(100γb/100+mc)gm/cc	2.09	2.09	2.09
MDD	2.13	2.13	2.13
OMC	12.60%	12.60%	12.60%
% of Compaction Obtained	98.22	98.25	98.14
Compaction Required	98%	98%	98%

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TEJUS

Field Dry Density test by Sand Replacement Method (As per IS 2720 (Part 28)

Project	Asphalting to Roads and Improvements to Drains at Defence Layout and Ashrama Road in ward No 06 Byatarayanapura Sub Division.		
Client	BRUHAT BANGALORE MAHANAGARA PALIKE		
Consultant	M/s Tejus Consultants		
Contractor	M/S Sathya constructions		
Date of Testing	20.11.2019		
Layer no. or level	WMM I layer		
Depth of hole	250mm		
Field density:	1	2	3
Wt. of wet material from hole (Ww) gms.	6152	6118	6212
Wt. of sand+cylinder before pouring (w1) gms.	14000	14000	14000
Wt. of sand+cylinder after pouring (w2) gms.	9736	9732	9715
Wt. of sand in cone (w3) gms	835	842	830
Wt. of sand in hole (w4)=(w1-w2-w3) gms.	3429	3426	3455
Bulk density of sand (ys)gm/cc	1.31	1.32	1.31
Bulk density of material(i.e. wt. of the wet material) (yb) (Ww/w4*(ys))gm/cc	2.35	2.36	2.36
Moisture meter reading(moisture content)	12.45	12.56	12.57
Result			
FDD(Wt.of the dry material)=(100yb/100+mc)gm/cc	2.09	2.09	2.09
MDD	2.13	2.13	2.13
OMC	12.60%	12.60%	12.60%
% of Compaction Obtained	98.13	98.32	98.23
Compaction Required	98%	98%	98%

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AGGREGATE IMPACT VALUE
(IS: 2386 Part - 4)

Project	Asphalting to Roads and Improvements to Drains at Defence Layout and Ashrama Road in ward No 06 Byatarayanapura Sub Division.		
Client	BRUHAT BANGALORE MAHANAGARA PALIKE		
Consultant	M/s Tejus Consultants		
Contractor	M/S Sathya constructions		
Proposed Use	BC	Date of Sampling	25.11.2019
Sample Location	At plant	Date of Testing	25.11.2019

Sl. No.	Description		Test No. 1	Test No. 2	Test No. 3	Spec Limit (%)
1	Wt. of stone pieces (dry) passing IS Sieve 12.5mm but retained in IS sieve 10mm (gm)	(Wa)	384.00	362.00	342.00	
2	Wt. of the fraction retained in IS sieve 2.36mm after the impact test (gm)	(Wb)	286.00	268.00	255.00	
3	Wt. of the fraction passed in IS sieve 2.36mm after the impact test (gm)	(Wc)	98.00	94.00	87.00	
4	Aggregate Impact Value (%)	(Wc/Wa)*100	25.52	25.97	25.44	
5	Average Aggregate impact value	(%)	25.64			Max - 30 %

Remarks : ✓ Satisfactory / Not Satisfactory

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FLAKINESS AND ELONGATION INDICES (IS 2386, PART 1)

Project :	Asphalting to Roads and Improvements to Drains at Defence Layout and Ashrama Road in ward No 06 Byatarayanapura Sub Division.
Client :	BRUHAT BANGALORE MAHANAGARA PALIKE
Consultant :	M/s Tejus Consultants
Contractor:	M/S Sathya constructions

Type of Material	BC	Proposed Use	BC
Sample Location	At plant	Date of Sampling	25.11.2019
		Date of Testing	25.11.2019

Size of aggregate		Flakiness Index		Elongation Index	
Passing through IS sieve, mm	Retained on IS sieve, mm	Total wt. of aggregate retained on sieves (A) gms.	Wt. of aggregate passing from Flakiness gauge (B) gms	Wt. of aggregate retained on Flakiness gauge (C) gms	Wt. of aggregate retained on Elongation gauge after retained on Flakiness gauge(D)gms
63.0	50.0	0	0	0	0
50.0	40.0	0	0	0	0
40.0	31.5	0	0	0	0
31.5	25.0	0	0	0	0
25.0	20.0	0	0	0	0
20.0	16.0	632	73	559	70
16.0	12.5	1224	112	1112	85
12.5	10.0	524	72	452	60
10.0	6.3	520	56	464	50
Total		2900	313	2587	265

Note: Minimum 200 Pcs should be taken on each fraction of test

Flakiness Index(%):	10.79
Elongation Index(%):	10.24
Combined FI+EL (%)	21.04

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GRADATION FOR BC
(As per MORT&H 500-18,Grading-2)

Name of Work	:	Asphalting to Roads and Improvements to Drains at Defence Layoutand Ashrama Road in ward No 06 Byatarayanapura Sub Division.
Client	:	BRUHAT BANGALORE MAHANAGARA PALIKE
Consultant	:	M/s Tejus Consultants
Contractor	:	M/S Sathya constructions
Date of Testing	:	25.11.2019
Type of Mix	:	BC
Sample I/D	:	BC3

Sample Location:	At plant	Date of Sampling:	25.11.2019
Type of material & Purpose:	BC	Date of testing:	25.11.2019
		Oven Dry Wt.(gms):	1200.0

IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits
19.00	0	0	0.00	100.00	100.00
13.20	134	134.0	11.17	88.83	79 - 100
9.50	112	246.0	20.50	79.50	71 - 95
4.75	224	470.0	39.17	60.83	53 - 71
2.360	124	594.0	49.50	50.50	42 - 58
1.180	138	732.0	61.00	39.00	34 - 48
0.600	110	842.0	70.17	29.83	26 - 38
0.300	122	964.0	80.33	19.67	18 - 28
0.150	67	1031.0	85.92	14.08	12 - 20
0.075	102	1133.0	94.42	5.58	4 - 10
Pan	67.0				
Total	1200.0				

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TEJUS
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BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE MIX

Name of Work :	Asphalting to Roads and Improvements to Drains at Defence Layout and Ashrama Road in ward No 06 Byatarayanapura Sub Division.
Client :	BRUHAT BANGALORE MAHANAGARA PALIKE
Consultant :	M/s Tejus Consultants
Contractor :	M/S Sathya constructions
Date of Testing :	25.11.2019
Type of Mix :	BC
Sample I/D :	BC1

DETERMINATION OF BITUMEN CONTENT

Description	Trail 1	Trail 2
1. Weight of Mixture before extraction, g	842	856
2. Weight of Mixture after extraction, g	798	810
3. Weight of Bitumen	44	46
4. Weight of filter paper before extraction, g	2.00	2.00
5. Weight of filter paper after extraction, g	4.10	4.00
6. Weight of fines, g	1.40	1.70
7. Weight of Bitumen & fines	45.40	47.70
8. Bitumen content in %	5.39	5.57
9. Average Bitumen content in %	5.48	
10. Minimum Bitumen content in %	5.40	

GRADATION FOR BC AFTER EXTRACTION

(As per MORT&H 500-18,Grading-2)

Sample Location:	At site	Date of Sampling:	25/11/2019	
Type of material & Purpose:	BC	Date of testing:	25.11.2019	
		Oven Dry Wt.(gms):	798.0	

IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits
19.00	0	0	0.00	100.00	100.00
13.20	96	96.0	12.03	87.97	79 - 100
9.50	64	160.0	20.05	79.95	71 - 95
4.75	136	296.0	37.09	62.91	53 - 71
2.360	105	401.0	50.25	49.75	42 - 58
1.180	84	485.0	60.78	39.22	34 - 48
0.600	88	573.0	71.80	28.20	26 - 38
0.300	46	619.0	77.57	22.43	18 - 28
0.150	62	681.0	85.34	14.66	12 - 20
0.075	76	757.0	94.86	5.14	4 - 10
Pan	41.0				
Total	798.0				

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DETERMINATION OF RATE OF SPREAD TACK COAT

Name of Work :	Asphalting to Roads and Improvements to Drains at Defence Layout and Ashrama Road in ward No 06 Byatarayanapura Sub Division.
Client :	BRUHAT BANGALORE MAHANAGARA PALIKE
Consultant :	M/s Tejus Consultants
Contractor :	M/S Sathya constructions
Date of Testing :	25.11.2019
Type of Mix :	Tack coat
Sample I/D :	1

Determination	Unit	Test No		
		1	2	3
Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30	0.30 x .30
Area of Plate (a)	Sq.mtr	0.09	0.09	0.09
Initial Wt of empty Plate (b)	Kg	0.766	0.758	0.756
Final weight of plate after application of tack Coat (c)	Kg	0.789	0.781	0.779
Weight of tack Coat (d=c-b)	Kg	0.023	0.023	0.023
Rate of spread of tack coat	Kg/sq.m	0.250	0.256	0.251
Average	Kg/sq.m	0.252		
Specified Limit	Kg/sq.m	**0.250 Kg/sq.m**		

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ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
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AGGREGATE IMPACT VALUE
(IS: 2386 Part - 4)

Project	Asphalting to Roads and Improvements to Drains at Defence Layout and Ashrama Road in ward No 06 Byatarayanapura Sub Division.		
Client	BRUHAT BANGALORE MAHANAGARA PALIKE		
Consultant	M/s Tejus Consultants		
Contractor	M/S Sathya constructions		
Proposed Use	BC	Date of Sampling	26.11.2019
Sample Location	At plant	Date of Testing	26.11.2019

Sl. No.	Description		Test No. 1	Test No. 2	Test No. 3	Spec Limit (%)
1	Wt of stone pieces (dry) passing IS Sieve 12.5mm but retained in IS sieve 10mm (gm)	(Wa)	394.00	384.00	390.00	
2	Wt of the fraction retained in IS sieve 2.36mm after the impact test (gm)	(Wb)	302.00	294.00	298.00	
3	Wt of the fraction passed in IS sieve 2.36mm after the impact test (gm)	(Wc)	92.00	90.00	92.00	
4	Aggregate Impact Value (%)	(Wc/Wa)*100	23.35	23.44	23.59	
5	Average Aggregate impact value	(%)	23.46			Max - 30 %

Remarks : ✓ Satisfactory / Not Satisfactory

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FLAKINESS AND ELONGATION INDICES (IS 2386, PART 1)

Project :	Asphalting to Roads and Improvements to Drains at Defence Layout and Ashrama Road in ward No 06 Byatarayanapura Sub Division.
Client :	BRUHAT BANGALORE MAHANAGARA PALIKE
Consultant :	M/s Tejus Consultants
Contractor:	M/S Sathya constructions

Type of Material	BC	Proposed Use	BC
Sample Location	At plant	Date of Sampling	26.11.2019
		Date of Testing	26.11.2019

Size of aggregate		Flakiness Index		Elongation Index	
Passing through IS sieve, mm	Retained on IS sieve, mm	Total wt. of aggregate retained on sieves (A) gms.	Wt. of aggregate passing from Flakiness gauge (B) gms	Wt. of aggregate retained on Flakiness gauge (C) gms	Wt. of aggregate retained on Elongation gauge after retained on Flakiness gauge(D)gms
63.0	50.0	0	0	0	0
50.0	40.0	0	0	0	0
40.0	31.5	0	0	0	0
31.5	25.0	0	0	0	0
25.0	20.0	0	0	0	0
20.0	16.0	618	70	548	65
16.0	12.5	1214	110	1104	85
12.5	10.0	512	70	442	60
10.0	6.3	502	50	452	50
Total		2900	300	2546	260

Note: Minimum 200 Pcs should be taken on each fraction of test

Flakiness Index(%):	10.34
Elongation Index(%):	10.21
Combined FI+EL (%)	20.56

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GRADATION FOR BC

(As per MORT&H 500-18,Grading-2)

Name of Work	:	Asphalting to Roads and Improvements to Drains at Defence Layout and Ashrama Road in ward No 06 Byatarayanapura Sub Division.		
Client	:	BRUHAT BANGALORE MAHANAGARA PALIKE		
Consultant	:	M/s Tejus Consultants		
Contractor	:	M/S Sathya constructions		
Date of Testing	:	26 11 2019		
Type of Mix	:	BC		
Sample I/D	:	BC3		
Sample Location	At plant		Date of Sampling:	26.11.2019
Type of material & Purpose	BC		Date of testing:	26.11.2019
			Oven Dry Wt.(gms):	1200.0

IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits
19.00	0	0	0.00	100.00	100.00
13.20	152	152.0	12.67	87.33	79 - 100
9.50	118	270.0	22.50	77.50	71 - 95
4.75	214	484.0	40.33	59.67	53 - 71
2.360	132	616.0	51.33	48.67	42 - 58
1.180	142	758.0	63.17	36.83	34 - 48
0.600	114	872.0	72.67	27.33	26 - 38
0.300	131	1003.0	83.58	16.42	18 - 28
0.150	78	1081.0	90.08	9.92	12 - 20
0.075	52	1133.0	94.42	5.58	4 - 10
Pan	67.0				
Total	1200.0				

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BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE MIX

Name of Work :	Asphalting to Roads and Improvements to Drains at Defence Layout and Ashrama Road in ward No 06 Byatarayanapura Sub Division.
Client :	BRUHAT BANGALORE MAHANAGARA PALIKE
Consultant :	M/s Tejus Consultants
Contractor :	M/S Sathya constructions
Date of Testing :	26.11.2019
Type of Mix :	BC
Sample I/D :	BC1

DETERMINATION OF BITUMEN CONTENT

Description	Trail 1	Trail 2
1. Weight of Mixture before extraction, g	864	792
2. Weight of Mixture after extraction, g	818	751
3. Weight of Bitumen	46	41
4. Weight of filter paper before extraction, g	2.00	2.00
5. Weight of filter paper after extraction, g	4.10	4.00
6. Weight of fines, g	1.40	1.70
7. Weight of Bitumen & fines	47.40	42.70
8. Bitumen content in %	5.49	5.39
9. Average Bitumen content in %	5.44	
10. Minimum Bitumen content in %	5.40	

GRADATION FOR BC AFTER EXTRACTION

(As per MORT&H 500-18,Grading-2)

Sample Location:	At site	Date of Sampling:	26.11.2019
Type of material & Purpose:	BC	Date of testing:	26.11.2019
		Oven Dry Wt.(gms):	818.0

IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits
19.00	0	0	0.00	100.00	100.00
13.20	98	98.0	11.98	88.02	79 - 100
9.50	102	200.0	24.45	75.55	71 - 95
4.75	110	310.0	37.90	62.10	53 - 71
2.360	116	426.0	52.08	47.92	42 - 58
1.180	84	510.0	62.35	37.65	34 - 48
0.600	62	572.0	69.93	30.07	26 - 38
0.300	76	648.0	79.22	20.78	18 - 28
0.150	51	699.0	85.45	14.55	12 - 20
0.075	60	759.0	92.79	7.21	4 - 10
Pan	59.0				
Total	818.0				

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DETERMINATION OF RATE OF SPREAD TACK COAT

Name of Work :	Asphalting to Roads and Improvements to Drains at Defence Layoutand Ashrama Road in ward No 06 Byatarayanapura Sub Division.
Client :	BRUHAT BANGALORE MAHANAGARA PALIKE
Consultant :	M/s Tejus Consultants
Contractor :	M/S Sathya constructions
Date of Testing :	26.11.2019
Type of Mix :	Tack coat
Sample I/D :	1

Determination	Unit	Test No		
		1	2	3
Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30	0.30 x .30
Area of Plate (a)	Sq.mtr	0.09	0.09	0.09
Initial Wt of empty Plate (b)	Kg	0.786	0.785	0.754
Final weight of plate after application of tack Coat (c)	Kg	0.809	0.808	0.777
Weight of tack Coat (d=c-b)	Kg	0.023	0.023	0.023
Rate of spread of tack coat	Kg/sq.m	0.250	0.256	0.251
Average	Kg/sq.m	0.252		
Specified Limit	Kg/sq.m	**0.250 Kg/sq.m**		

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PRECAST SLAB (CORE) TEST REPORT

Client	:	Bruhat Bangalore Mahanagara Palike
Contractor	:	M/S Sathya constructions
Name of Work	:	Asphalting to Roads and Improvements to Drains at Defence Layout and Ashrama Road in ward No 06 Byatarayanapura Sub Division.
No.of Sample Tested	:	3
Date of Testing	:	28.11.2019
Technical Reference	:	IS:516-1959 (Reaffirmed 1999), SP-24:1983.
Grade of Concrete	:	M_{20} 250mm Thick

Sl. No	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
1	100.00	180.00	3.374	2386.62	1.80	0.960	159.24	20.28	21.90	21.02	26.28
2	100.00	180.00	3.434	2429.06	1.80	0.960	159.32	20.29	21.91	21.03	26.29
3	100.00	180.00	3.336	2359.74	1.80	0.960	159.46	20.30	21.93	21.05	26.31

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